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DIVISION OF PUBLIC HEALTH
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July 17, 2014
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United States Environmental Protection Agency
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Dear Lon and Jeff,

The Alaska Scientific Advisory Committee for Fish Consumption (the Committee) appreciates your review of the Alaska Fish Consumption Guidelines Update for 2014 (the Guidelines).

The Committee acknowledges the differences between EPA's and Alaska's approaches to risk assessment and management of mercury exposure from fish intake. However, the Committee believes these are minor differences resulting from uncertainties in the selected studies and the risk assessment process.

The Guidelines are based on good data, both from the Seychelles study and from Alaska fish monitoring efforts. The Non Observable Adverse Effect Level for neurodevelopmental effects in the Seychelles study is approximately 15 ppm hair mercury (a conservative estimate) in mothers whose offspring are still being monitored beyond their teen years. Using the Faroes Islands data, which the EPA guidelines are based on, the lowest detectable effects on the most sensitive neurocognitive test, was at 85 micrograms/L of whole blood with a lower 95% confidence interval = 58 micrograms/L. The Faroe Island women in that study were also exposed to organohalogen contaminants in much greater amounts than the average Alaska fish consumer. Even in women who eat sea mammals regularly, in coastal Alaska villages, the Alaska Native Tribal Health Consortium has not seen a maternal blood mercury level over 21 micrograms/L and the average in those communities is less than 5 micrograms/L. Moreover, the Alaska Hair Mercury Monitoring Program has reported only four exceedances of the state's level of concern in 1145 women of childbearing age during the past 12 years of the program's existence.

The Committee acknowledges that selection of study (Seychelles *vs*. Faroe Islands) makes a difference in acceptable daily intake outcomes and that no one study has all the answers to the safe threshold of mercury intake in fish. However, the Committee recognizes the many benefits associated with fish consumption in addition to the uncertainties in study outcomes and risk assessment to develop an acceptable daily intake. Therefore, when considering the well-established benefits, highly uncertain toxicity thresholds, and both high traditional and nontraditional consumption, the Committee finds it prudent to adopt the study that most resembles the Alaska situation in terms of diet (*i.e.*, Seychelles due to fish consumption and not the Faroe Islands with marine mammal contributions) to develop the acceptable daily intake.

In addition, the State of Alaska has two programs to support fish consumption and health:

1. The Alaska Hair Mercury Biomonitoring Program that encourages women, particularly those of childbearing age, to donate hair samples for analysis at no cost to them. This program can inform women if their fish intake is resulting in potentially undesirable mercury exposures. The state follows up with every woman whose test result may approach the state's hair mercury level of concern.
2. The Alaska fish monitoring program is available to anyone who would like to send a fish sample for mercury and possibly persistent organic pollutant analyses. This is another way of letting people know what and how much contaminants are in their fish. The state provides appropriate fish consumption advice for private citizens who send in fish samples for analysis.

The Committee agrees with EPA that Alaskans may benefit from fish in the "Unrestricted" category of the Guidelines, ***particularly if they would like to minimize their exposure to mercury***. In the Guidelines, the Committee refers to this notion in at least seven instances. The Alaska Division of Public Health also emphasizes this notion on its website. See both below:

Excerpts from the Alaska 2014 Fish Consumption Guidelines:

1. Consumers of store- or restaurant-bought fish are encouraged to eat more fish, particularly fish that are lower in mercury, for their important health benefits. Very few commercial fish from Alaska are affected by the Alaska fish consumption guidelines. Most Alaska fish species, including all five wild Alaska salmon species, are very low in mercury and are safe to eat in unrestricted quantities. Women of childbearing age and children may enjoy unrestricted store- or restaurant-bought halibut meals per month, as the average weight of commercially-caught halibut in Alaska is only 32 pounds and does not contain mercury at levels of health concern. On occasion, lingcod, yelloweye rockfish, and spiny dogfish may also be available commercially. Consumers of those fish species are advised to follow the fish consumption guidelines outlined in Table 6.
2. Obstetricians and other health care providers are being informed about Alaska fish species with low mercury levels, Alaska fish species with the highest omega-3 fatty acid levels (and thus the greatest potential benefit to the developing fetus), and Alaska fish species that should be consumed sparingly during pregnancy.
3. Fishers who are concerned about mercury levels in the large halibut they catch (particularly ≥ 80 pounds) are encouraged to have their fish analyzed for mercury so that DPH can provide individualized advice about the maximum amount of that fish sensitive family members are can safely consume each month.
4. Recreational fishermen and fisherwomen who catch longnose skate, yelloweye rockfish, spiny dogfish, large halibut (≥80 pounds) , large lingcod (≥40 inches), and salmon shark are highly encouraged to contact the ADEC fish monitoring program for testing as these fish can vary considerably in their mercury content and may not be equally suitable for consumption by pregnant women and children.
5. In cases where women and children are advised to limit consumption of a particular species, they are encouraged to substitute that species with fish that have lower tissue concentrations of mercury, such as salmon. If they cannot obtain salmon, communities are encouraged to substitute the fish species to be avoided with a healthy protein alternative.

6. Fishers who are concerned about mercury levels in the large halibut they catch are encouraged to have their fish analyzed for mercury, so DPH can provide individualized advice about the maximum amount of that fish sensitive family members are suggested to eat each month. While some large halibut from Alaska have mercury levels high enough to warrant consumption restrictions for sensitive populations, some do not have high mercury levels and are safe to eat in larger quantities.
7. People limiting consumption of a particular fish due to mercury concerns may substitute it with an Alaska fish lower in mercury (such as salmon), or with another food of comparable nutritional quality.

Excerpt from the State of Alaska Section of Epidemiology website:
This is a recommendation to consume smaller, younger fish (that would all fall into the "Unrestricted" category) at http://www.epi.hss.state.ak.us/eh/fish/default.htm:

> **Good Advice for Everyone**
>
> ***Eat fish at least twice a week.***
>
> ***Eat smaller, younger fish***. They generally have less mercury than those that are long-lived and eat other fish. Larger fish are often breeding females, so keeping them in the ocean helps sustain fish populations and helps prevent over-fishing.
>
> ***Eat a variety of fish and other seafood.***
>
> ***Choose fish high in omega-3 fatty acids and low in mercury more often. Examples include:***
>
> - Wild Alaska salmon
> - Black cod, also known as sablefish
> - Herring
> - Sardines
> - Canned chunk light tuna

The Committee thanks EPA for its comments and plans for continued communication and collaboration on this and other topics of environmental and public health interest.

On behalf of the Alaska Scientific Advisory Committee for Fish Consumption, sincerely,

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